ONTARIO
FISH AND WILDLIFE
REVIEW

Volume 3, No. 4 Winter, 1964

ONTARIO

DEPARTMENT OF LANDS AND FORESTS

HON. A. KELSO ROBERTS Q.C., MINISTER F.A. MACDOUGALL, DEPUTY MINISTER

ONTARIO
FISH AND WILDLIFE
REVIEW

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THE COVER

Is the Husky on its way out as a means of transportation in the north? This handsome fellow was photographed by Ted Jenkins near Kenora. (See report on the sleigh-dog by Carl E. Monk in this issue).

ONTARIO FISH AND WILDLIFE REVIEW is published four times per year by the Department of Lands and Forests, Parliament Buildings, Toronto 5, Ontario.

WHEN TO FISH?

Life was fairly predictable in "the good old days" before the atom age. Tackle boxes were put away about mid-September and left in storage until about the end of April, at which time the eager angler was primed to get out in the great outdoors for any reason. On the first of May, he would assemble his speckled trout fishing gear; on the fifteenth of May, he would rummage through his tackle box for his best walleye lures; and then, after a lull, about the first of July, he would have to hunt frantically for his bass or musky equipment because by the first of July all fish were "in season".

In the past ten years, we have seen revolutions in air travel, rocket shots, transportation, building, work weeks and all the phases of engineering and science which have undergone such a change during this decade. In every field of endeavour, the past decade has been one of considerable change socially, economically and culturally.

Even the anglers have changed. There are more of them; they have more time, more money and more inclination to travel farther at any time of the year. Many are no longer prepared to put away the tackle box in September but want to fish the full twelve months of every year.

As a result, fisheries managers are faced with the problem of deciding when fishing should be permitted. Not all the public agree on this question. People who live in the city and spend two months at their cottages claim that fishing should be carried out during the summer months. Tourist Outfitters, who are often interested in extending their season, would like to see angling from mid-spring to mid-fall. The people who live in northern Ontario and the avid angler, who will travel anytime to fish, are even more liberal in their outlook and cannot support a closed season if the resource is not endangered.

Certainly, one of the most unproductive periods of the year for catching fish is mid-summer when angling pressure is greatest. To harvest the crop that is available, it is almost necessary to take fish when they can be had, providing such harvest is not in excess of the productive capacity.

The question therefore is not "when do *I* want to fish" but rather "when and how long fishing can be permitted" without overfishing. The answer lies not in opinions but in the facts obtained by biological investigations.

THE SLEIGH–DOG

by Carl E. Monk
Fishery Management Officer, Port Arthur Forest District

Is the sleigh-dog destined for the same fate as the horse? Is the howling and barking that issues forth from our remote Indian settlements soon to become a "Swan Song"? For both the breed and the cur, the outlook now has sinister forebodings.

Modern farm machinery and mechanical logging have reduced 'Dobbin' to a show-piece at the local fair. Similarly, the snowtoboggan, skidoo and snowmobile threaten to leave only the winter carnival open to the sleigh-dog. Science and technology seem to be catching up to another of our domestic servants.

It took centuries to cultivate the sleigh-dog–centuries studded with legends, curses and many a kick-in-the-ribs for Rover.

Runners–that is the word for dogs and their relatives. In past ages, however, they were not the speedy creatures with which we are familiar today; they once walked flat-footed upon the earth. But a swift animal is likely to be a longer-lived one. In time, changes took place: they came to walk on their toes. Nature favoured them and they soon replaced their slower ancestors.

The domestic dog was tamed by man before the dawn of history. It is believed that it was the first animal brought under human domination, and we possess evidence that the man of the New Stone Age had his own dog in 6,000 B.C.

In a general way, the dog was derived from early wolf stock in Asia (though not from the true wolf). This dog probably accompanied man across the Bering Straits into North America. By selective breeding, man has produced different types to serve him in diverse ways: as sheep and herd dogs, racing and hunting dogs, and sleigh and watch dogs..... to mention a few. Today, there are some 145 popular breeds of dogs–more than any other domestic animal. In North America, alone, there are about twenty million dogs.

Eskimos and Indians of North America probably tethered their female sleigh-dogs in the open in wolf infested areas. Crossbreeding improved the strain and nature of the animals. At any rate, the breed most commonly recognized as a sleigh-dog today is the 'Husky'. Its long, thick coat varies in shade from almost black to white. In the northern regions, the light shades are predominant, perhaps in keeping with the long white winters. The sleigh-dog has short ears and a long bushy tail. This tail serves a useful purpose: protecting its naked nose from frost bite when sleeping out in sub-zero temperatures.

The early life of the modern sleigh-dog in northern outposts is much the same as that of any other dog. The pups come into the world as little fluffs of fur, conscious of a mother and unconscious of a father. Their big feet and cute antics win admiration from children and adults alike. They are permitted to roam and play about the village for most of the summer–romping with each other and taunting the older dogs who are tied by strong chains to individual make-shift houses. This carefree summer passes quickly, but how will these mischievous pups survive the coming winter? This will

Sleigh-dogs proved invaluable during salmon planting operations at Goose Creek, a Hudson Bay tributary. Below: The fan hitch as used on the Hudson and James Bay coasts of Ontario. Harnessed individually, each dog picks his own traction. Staff photos.

depend on their ability to adapt to all aspects of the harness. In the lean and scant northland, the elements of survival are as mixed in the life of the sleigh-dog as they are in the life of his master. There is no room for weaklings. Once he attains his 'status', the life of a sleigh-dog is simply—a dog's life.

The requirements of a successful sleigh-dog are few and simple: pull his share of the load, never fight with other dogs, and eat as little as possible. Failure to meet these preconceived notions of the master spell doom for any unwilling dog. Usually, a stout sapling firmly flicked at the ears spurs the dog to new-found power. Well aimed kicks and blows to the ribs, and sometimes hot water, dis-

Dogs are used to haul fish during winter fishing operations at Winisk Lake. Below: Sleigh dogs transport freight to plane in far north. Photos by D.M. Croal.

courage the fights. And always, the meals leave something to be desired. From the very first hitching through to the last—the commands directing the dog team strain in a unique corridor of profanely-etched expletives. For this reason, perhaps, when kind words or deeds occasionally favour the sleigh-dog, he seldom responds with more than a furtive glance and two wags of his bushy tail. It is interesting to note that, in most northern villages, dogs are retained only for pulling a sleigh.

The diet of the sleigh-dog varies from season to season and from region to region. A few fortunate dogs may

have carefully processed rations of superb ingredients. In many a northern village, however, such is not the case....the pickin's are poor and the crop is lean. After a long hard day, the dog is rewarded with one or two fish, preferably soft-rayed varieties (suckers, herring and ling) not nec-

essarily fresh. Occasionally, remnants of moose or caribou, as well as fur-bearer carcasses, supplement the fish menu.

Along the coast of Hudson Bay, the diets of sleigh-dogs vary with crops from the sea: whale, seal, walrus and polar bear. Here, stilt-like platforms are constructed to a height of six or seven feet above the ground to store the meat from such animals. Only a pretext at curing such carrion is noted: the real purpose is to prevent the ever-hungry dogs from devouring seven days' rations in one good meal. Throughout most of northern Ontario, the snowshoe rabbit (varying hare) furnishes a great buffer type food for the sleigh-dog.

The devious methods of hitching dog teams again depicts the ingenuity of man. Three main hitches are employed today. First is the single hitch: one lead dog (usually keen and eager to please) followed in direct line by from one to ten or more dogs. Second is the tandem hitch: again, one lead dog with the rest harnessed in pairs directly behind the lead animal. Third is the fan hitch: each dog is harnessed individually to the tow-line fanning out in a semi-circle, again with the lead dog well out front. In the latter method, each dog picks his own traction, resulting in an equal distribution of pull. Emergencies like thin ice, snags, crevices.....afford the dogs a better chance for escape with the fan hitch that when harnessed together.

The sleigh-dog's history is long and filled with grandeur. He accompanied Amundsen to the South Pole and Byrd to the North Pole, respectively. Many a weary *coureur de bois* probably owes his sanity or life to his faithful sleigh-dogs. The furs that graced milady's shoulders in some exotic city during the last 300 years may have begun their journey on a dog sled in northern Canada. Indeed, the sleigh-dog has his roots imbedded deeply in the romance of this nation.

Now (at least in the near future), the sleigh-dog's "status-quo" in the north is being seriously challenged by mechanization. Trips last winter into the Patricias of northwestern Ontario revealed a decided switch from dog-team to skidoo. At Deer Lake, some 200 air miles northwest of Sioux Lookout, four skidoos were observed in operation at one time. Later, they were parked neatly side by side outside the local school-house. Oh well! – at least they don't fight with each other like the dogs.

"At least I don't have to feed the skidoos all summer for nothing", says one Indian at Deer Lake. "It only eats when it runs."

"It doesn't get tired either", says another. "And it don't howl all night."

Whether the scheme of things to come favours or disfavours the legendary sleigh-dog, it appears that he has made his mark in history.

The plaintive growl that greeted one at Indian settlements in the past is now being replaced by the steady growl of a gasoline engine. The trails in the north that once knew only the soft tap of leathery paws are now feeling the hard crunch of rubber tracks.

The transition will not be easy: the curses will now fall on deaf ears; the kicks against a metal skidoo will yield little satisfaction; and the arctic nights will surely seem longer and lonelier.

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THE PORCUPINE VERSUS PLANTATIONS

by Donald T. Gildner
Forest Technician, Grey and Bruce Zones, Lake Huron Forest District

Porcupine damage is a problem of increasing importance in certain reforested areas of southern Ontario. One such area is Grey County of the Lake Huron District which, although predominately agriculture, has over one-third of its area wooded. The tree planting of abandoned pasture on private and municipal land over the past 40 years has resulted in the establishment of numerous, small conifer stands scattered throughout the area.

The porcupine originally evolved in South America but migrated north after the land bridge on the Isthmus of Panama became re-established a few million years ago. By the time the settlers came to this area, the porcupine had long since become adapted to the prevailing hardwood, cedar and hemlock forests, and even today do relatively little damage in them. When presented with the more palatable bark of the trees in the young conifer plantations, the situation changes drastically since the feeding usually occurs in the form of a death dealing girdle.

Typical porcupine den, near the edge of mixed lowland woods and about 130 feet from girdled trees. Photo by the author.

In order to devise a practical control program, a survey of the porcupine's habits was made during the past two winters. This was combined with field tests of several extermination methods. Several factors indicated that a practical control could be obtained through the elimination of the offending animals. Facts considered important were the porcupine's reproduction rate of usually one, or sometimes two, young a year, its limited range, slowness afoot and year-round activity. These points (along with the fact that most of the bark feeding is done during the colder months) indicated that the snowy periods of winter would be the best for control work. In previous observations, it was noted that most damage occurred near the edge of plantations which bordered natural woods.

A patrol was initiated along plantation edges in areas of known damage in order to locate winter activity. Several areas of natural woods which had suffered damage were also included. In addition, a detailed survey was made of an area containing a 17-year-old red pine plantation and lowland mixed woods.

Winter proved to be an ideal time to locate porcupine activity. Trails and, thereby, the dens are easily located in the snow. Main trails take on a trough-like appearance and lie between the den and feeding area. Fresh browse feeding debris on the snow and bark-stripped tree stems could often be spotted more quickly than the trail. Most damage was

Porcupines feed on bark in conifer plantations during colder months. Staff photo.

A typical conifer stand on abandoned, sandy farmland. Staff photo.

found within 50 feet of the plantation edge.

Although porcupines are noted for the damage to tree bark and outbuildings, these items are not their main food. In the summer, the food consists of various succulent plants including aquatic vegetation. When this food becomes unavailable in the winter, the browse and bark of trees replace it. Of the two, browse is undoubtedly the principal winter food. Many of the active porcupine areas observed indicated that browse was the only food taken during the winter. This type of feeding was most prevalent on cedar and hemlock with elm, white pine and red pine browse commonly eaten. Browse feeding appears to occur to some degree on all tree species from which bark is taken.

The extent of bark feeding varied with the individual porcupine and the availability of preferred tree species. A few porcupine (when established in a pine plantation) appeared to feed almost entirely on bark. As high as 44 girdled red pines in a 25-year-old stand were traced to a single animal late this past winter. In the same stand, other individuals did only scattered bark damage, preferring the browse instead. The tree species most frequently damaged by bark feeding are larch, Scotch pine and red pine in plantations and hard maple in natural woods. Other species commonly fed on are white pine, beech, hemlock and soft maple. Damage was also noted on basswood, elm, spruce and balsam fir. In areas of low porcupine population, damage on hard maple is usually confined to a small number of trees, frequently around cankered areas. White pine bark was often eaten around blister rust cankers.

This type of feeding is also occasionally done by squirrels.

Although porcupines are found throughout all types of wooded areas within their range, the highest numbers by far occur in mixed lowland stands and in and about limestone escarpment areas. Both of these areas contain numerous den chances. In lowland areas, dens are usually located under large rotting stumps or tree roots, while dens in escarpments are in cave-like crevices in the limestone. Many dens consist of snow, supported by roots or fallen trees, and are exposed in the spring. The inner chambers have diameters as large as 10 feet. It was noted, however, that some porcupines do not use dens but merely remain in the dense foliage of trees, such as hemlock and pine, for long periods. One porcupine was found to have been using, for sometime, an exposed resting place at the base of an elm tree. Normal winter movement appeared to be limited to less than 500 feet from the den.

When porcupine activity was encountered in or near a plantation, one of two methods was used to eliminate them. If the animals were located outside the den, they were shot. If in the den at the time of the patrol (which was the usual case), poisoned baits were placed in the entrance.

While making this survey, an interesting relationship between porcupines and the snowshoe or varying

Left: Porcupine damage on red pine near the edge of the plantation. Right: A coppice clump of hard maple. Note that porcupine have eaten the bark on the two outside trees above the girdle previously made by hatchet in a thinning operation, while the untreated tree in the centre has not been damaged. Photos by the author.

hare was observed. In the process of feeding on browse, which occurred most frequently on cedar, a considerable amount of green foliage dropped on the snow. This provided a food supply for the snowshoe which virtually trampled flat the areas under these trees. Since a porcupine usually over-winters in one small area and feeds almost daily, a continuous, easily located supply of fresh food is made available to the snowshoe. The hares not only benefit from food but also make liberal use of the porcupine's den during the winter. This was further confirmed by examining a number of dens after the snow melted and discovering a considerable amount of droppings from both hares and porcupines. Since this relationship occurs during the most severe part of the year, the effect on the local wintering snowshoe population would appear to be highly beneficial. Companionship is the only apparent advantage the porcupine receives.

Porcupines are of value to wildlife in other ways since they tend to reduce the proportion of large trees. This encourages ground growth on which a number of animals feed.

It had been noted that feeding on maple bark often occurs around damaged or diseased areas of a tree. These areas apparently contain a higher concentration of carbohydrates. This selective feeding was clearly demonstrated in an area of pole-size hard maple which had been thinned by frill girdling followed by an application of a chemical. Within 10 months, it was observed that over 60 per cent of the treated trees had been girdled by porcupines feeding just above the original girdle. Although there is a high population of porcupines nearby, there had been no previously noticeable feeding, nor were untreated trees damaged in the area surveyed. The likely reason for this sudden increase in feeding is that the treated maples remain active the first year but are unable to transport carbohydrates down past the hatchet girdle, causing a concentration in the area above. The porcupines were surprisingly quick to take advantage of this situation.

From the information gathered, the reduction of porcupine damage can be obtained in two ways. The elimination of offending porcupines, using a gun and poisoned bait during a winter patrol, appears to be a satisfactory control method. However, much of the problem could be eliminated in future plantations by planting tree species, which are not subject to serious porcupine damage, next to areas of high populations.

Although a detriment to forests, the porcupine's influence on other wildlife appears favourable. Studies to understand the total influence of porcupines on their surroundings would provide much useful information relative to their control and might even prevent unnecessary, indiscriminant destruction.

Although much maligned, the porcupine does have a homely charm about him once you get to know him.

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DUCK BANDING AT ARM LAKE

by B.H. Gibson
Biologist, Geraldton Forest District

A banding program has been conducted each year on Arm Lake since 1958 by Department personnel. The aim of the banding project is to band as many black ducks and mallards as possible during August and the first week of September to assess duck mortality, to clarify migration patterns and to provide information to help manage waterfowl on a sustained yield basis.

Arm Lake, located 25 miles northeast of Geraldton, has an area of 197 acres and an average depth of four feet. It was a duck hunter's paradise a decade ago before the area became too easily accessible to hunters. Profuse stands of wild rice attract many flights of black and mallards and lesser numbers of other species as they prepare for their southward migration.

By approximately August 15 of each year, our duck banding camp is set up at Arm Lake in preparation for banding. The traps are placed in one foot of water in a shallow bay at the west end of the lake where ducks normally congregate to feed and rest. It is futile to attempt to lure the birds to traps in areas where they do not usually congregate. Although there are several methods of capturing waterfowl for banding purposes, Geraldton District uses traps baited with grain. Barley and cracked corn seem to be preferred by the ducks.

Three types of traps were tried. They varied mainly in style of entrance and overall size. Each trap was constructed of spot-welded wire with a mesh size of two inches by two inches. The traps are four feet high and anchored to the soft bottom with aluminum-alloy rods. Discarded trap-netting with a mesh size of two inches is used to cover the traps to prevent escapes of captured ducks.

Initially, the "lily-pad" type of trap was used. This trap is well named because its shape is much like that of a lily-pad when viewed from above. It usually works well in capturing ducks with a duck entrance that extends the full height of the wire. It was found, though, that this type of trap with a single funnel entrance is more effective than the ordinary lily-pad trap.

During the 1963 banding, experiments were carried out with a larger trap with three duck entrances and a collecting box. This trap was 15 feet in diameter, compared with the 10 foot diameter of the single entrance trap. The collecting box is simply a cage into which the ducks can be chased and removed after being trapped. The birds are more easily removed from this trap than from the lily-pad type where it is necessary to enter the trap with a landing net and capture the ducks like so many fish.

After the traps are erected, they are usually baited liberally with about 50 pounds of a mixture of cracked corn and barley. The grain is scattered around the outside, inside and in the entrances. Usually, it takes from two to eight days before the ducks begin feeding around the traps. Once a few ducks discover the grain, an influx of blacks and mallards occurs. The grain appears to be a welcome change of menu for the waterfowl, many of which have probably never sampled grain.

Note the abundant growth of wild rice in this view of Arm Lake. Staff photo.

Within a day or two after discovery of the bait, the first captures are made. As the duck telegraphy spreads the news of a free feed and new flocks move into the area, the ducks near the traps increase to several hundred birds. Captures are made rapidly at this time. The traps are emptied early in the morning and late in the evening. The traps are re-baited each time they are checked to replenish grain that is eaten or has become buried in the soft bottom.

When the traps are approached and entered, the captured ducks become extremely agitated. Some fling themselves at the wire of the cage; others dive and swim around and around; others spring from the water only to rebound from the netting covering the traps. The ducks are removed as quickly as possible to reduce excitement and injury to the birds. Once removed from the trap and placed in a burlap sack—usually about six to a sack—they are docile and easily handled. They are then taken immediately to the camp-site and subjected to what must be an extremely humiliating and distasteful (for the duck) experience. As each duck is being banded, it finds itself in an upside-down position with its head tucked under the bander's arm. A metal leg band bearing a serial number is attached to one leg just above the web. Gently prying fingers then spread the vent region to reveal the sex and age of the bird before the ordeal is concluded. The information on each bird is recorded and the bird is released.

Most of the released ducks seem anxious to vacate Arm Lake, at least for that day. Some birds, however, seem to almost enjoy being recaptured. One immature black turned up five times in two different traps in 1962. This "trap

A lesser scaup (bluebill) goes into the sack for transportation to camp where it will be banded. Ducks remain docile in the bag but no more than six are placed in each sack to keep down injuries. Staff photo.

Circular-type trap. Captured ducks may be seen to right of funnel. Staff photo.

Age, sex and band number are recorded as a lesser scaup is banded. Staff photo.

bum", as he was soon named, was not easily discouraged from collecting his daily hand-out. Soon, however, he seemed to grow tired of being captured every day or two.

The most successful year of banding was in 1963. Two hundred and twenty-six ducks of eight species were banded. Blacks and mallards accounted for 90 per cent of these. The remainder included lesser scaup (blue-bill), American widgeon (baldpate), goldeneye, blue-winged and green-winged teal and pintail. Pintails are infrequent visitors to these marshes and are seldom seen at the banding location.

Immature ducks outnumber adults by about six to one in the captures. Young birds appear to be less cautious and more easily captured than older birds. Young ducks are also more numerous in the population.

There have been some unusual captures of ducks. In 1962, an adult male mallard was caught on August 26 carrying a leg band. It was learned that the bird had been banded on January 29, 1962, at Cambridge, Maryland—almost 1500 miles away. In the same year, an adult male black and an adult female mallard were trapped bearing consecutive band num-

The author, about to release a black duck; note band on left leg. Staff photo.

bers 637-29858 and 29859. These birds had been banded by us on August 29, 1960.

One very unusual recovery of a duck banded at Arm Lake concerned a blue-winged teal. It was banded as an immature female in August 1960. During April, 1962, it was shot in Cuba, approximately 3,000 miles from where it was banded. Could this duck have been the unfortunate victim of a hastily launched ground-to-air missile?

One of the most interesting aspects of duck banding is receiving recovery information on where and when the birds are shot. More than seventy band recoveries have been reported for ducks banded at Arm Lake. Of these, over 90 per cent were recovered east of the Mississippi River, indicating that the ducks banded at Arm Lake migrate by way of the Mississippi and Atlantic Flyways.

Waterfowl banding in Ontario is increasing in importance in management. The Arm Lake project is one of a number of similar studies carried out in Ontario by the Department of Lands and Forests in an effort to learn more about the life histories, migration patterns and mortality rates of our waterfowl population.

THE EYE---THE SHADOW---THE CANADA LYNX

by E.H. Lucking
Biologist, Gogama Forest District

Imagine a soft, near-silent pad-pad-pad-pad. The shadows of dusk shift slightly and then become still—and still they remain until broken by an awkward, slow hopping with upright ears. A swift flick, one bound, another—a squeal. This is the hunt, the chase and the kill as a lynx and snowshoe hare are caught up in a pattern of life which is as natural and instinctive as breathing.

As she crouches over her latest meal, this cat gives little hint as to her size. A careful look would show that, comparing cats, the head of this lynx is large in proportion to her body. Should she stand, then the length of her legs would be striking. She is three feet long, from the tip of her nose to the tip of her stubby four inch tail, and two feet high at the shoulder, with her sleek, lean hind quarters set slightly higher. Walking slowly, she appears to be moving downhill.

Should she begin to walk, lifting one foot in preparation, her legs would appear particularly long and rangy in constrast to her large, well-furred feet—broad, to act as snowshoes, yet armed with five claws in front, and four behind, for clawing at either the ground or flesh.

But until she stands or moves away, let's take the opportunity to watch her. There's not too much light left, so you'll have to look closely to see her markings. If it were brighter, she'd not appear so black and white. Actually, her pelt is sort of a grayish brown above, and a bit darker on her back and head. Though you can't see it, the colour fades to a grayish white along the under side.

With her head down like this, you'll have to wait for a better view. She'll raise up, in a moment, to look around. Be sharp and you'll see the white spot on the backs of her ears and the long black tuft or "pencil" as it's sometimes called. Her face, if you can see, will appear a bit barred. That's because she has a heavy cheek ruff with black-tipped hairs and long, strong whiskers. She also has a spot at the corner of the mouth and a .....see? Look now.

A spot on her chin? Boy, that's blood!

You know, as she sits there eating, I'll bet she has no idea that she has any name other than a growl, deep in her mother's throat. Maybe it's just as well, though. *Lynx canadensis* isn't something she'd likely be able to pronounce.

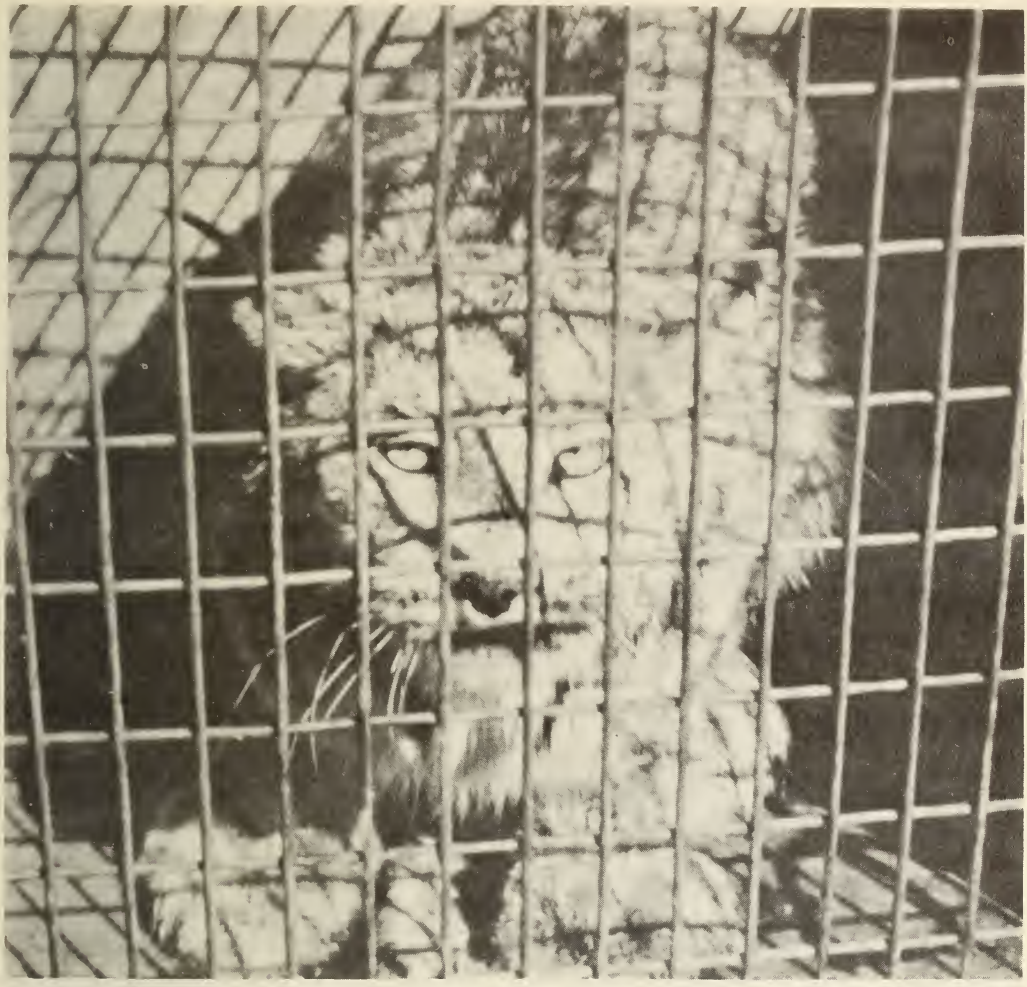
Well, you see, it's a scientific name, and this enables men from Canada to talk to people from Mexico or France or Holland. Using this name, they all know that they are talking about the same animal.

"Canadensis" means, generally, "of Canada". The "Lynx" part goes back into early European languages where the meaning gets vague though it's thought to have something to do with sharp eyesight.

Europe? Sure—there was once a lynx or lynx-like cat on all continents except Australia where there are no native cats, although they do have a cat-like marsupial called *Dasyurus*.

Anyhow, it's a fair bet about her eyesight. Even though she has a sharp ear and nose, it's her eyes she depends on mainly, when hunting.

Now see here, if we leave her alone,



A lynx, live-trapped at Gogama. Photo by the author.

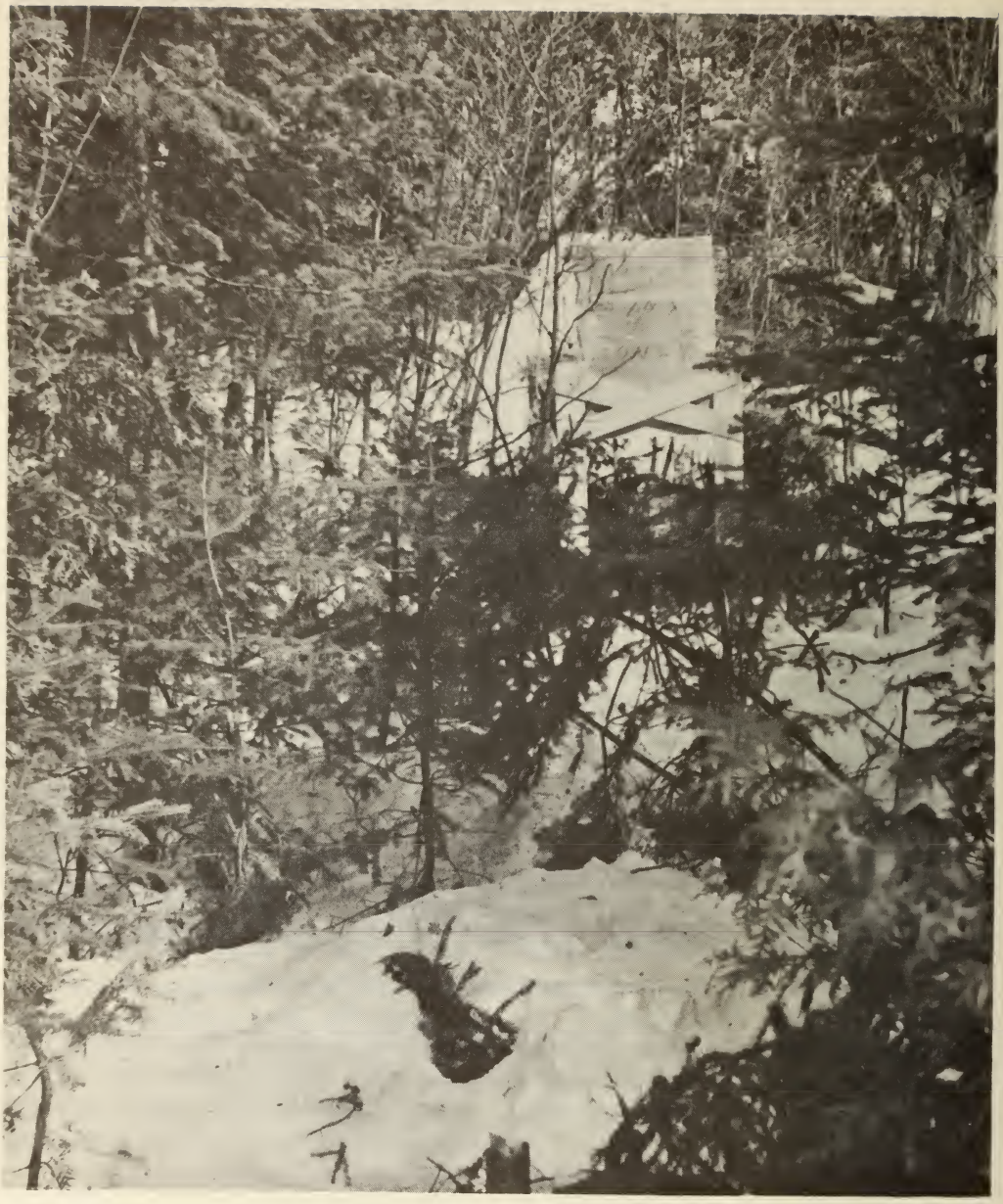
she'll act just like a house cat, clean her paws and face and settle down. If we can scare her off, I'll show you something.

Move a bit—stand up. There—she spotted you. See how she trots away? Well, these lynx don't generally run unless they are scared half to death or just playing. Startled like this, lynx move into a fast trot. It's too bad the light is fading; we might have seen the spots inside her legs or the black tip on her tail.

Let's have a look at her bed. The type she used—over there, where she began her attack—is of a resting or hunting style. This is where she crouches while hunting in the night and where she stays after a kill. If they miss their lunch in the first few jumps, they give up and start again.

Here are the remains. Not much, is there? Only the paws and a bit of pelt. This bit of gut is the stomach and the caecum, a sort of blind pouch. Everything else—bones, head and all—is consumed.

Oh yes, a full grown hare, less these bits, comes to about 2½ pounds. By watching captive lynx, research work-



Live trap set used in lynx live trapping project. Photo by T.J. Carmichael.

ers figure that one cat will take about 170 fully grown snowshoe hares each year or about 200 including young. Considering the number of other predators which eat snowshoe hare, it's not too hard to figure why nature made them so prolific.

Just about this time of year, she'll be carrying her young, assuming she's been bred, and they'll be born in March or April. The gestation period is 60 days or more—Oh, I don't know, three or four kittens, I would suppose, although you hear a lot of talk about twins. The female has four nipples, two on each side of her belly.

When this one was born, she was more buffy in colour and more blotched

and streaked. As she grew older, the colour and pattern changed at about nine months of age, so now she has the adult pelt. Other than this young-to-adult change, there will be no other—except that her coat will become paler during the winter.

As the time of birth approaches, the cat will cut down her range to about five square miles. When she's ready to deliver her young, she'll have made a nest in a hollow log, or a crack in a rock, or under a windfall – some such place – and lined it with leaves, bark or ferns.

Her kittens will be weaned in two to three months and until then will remain close to the nest. Later, they'll travel with her, following her pattern and learning to hunt.

She teaches them what she learned from her mother, to flank her by some 20 to 30 paces through the bush but dropping into line if they crossed any open spaces.

There has been an account of a pair of lynx hunting together – only instead of flanking, they moved abreast, a few yards apart. But they, too, moved in line over any open patches.

They don't bed down together. The young are only about five feet away – but in separate beds of their own.

No, lynx are generally solitary animals, keeping much to themselves. Any groups are usually families, a female plus her litter. They break up in the following spring as the kittens are ready to breed at one year of age.

The Tom isn't considered as part of this group. He is around to start his family but then loses interest, and the female is then on her own to bear and care for the young.

It's possible that he does maintain a sort of detached concern. One group of a female and twins was tracked, in Newfoundland, and it was found that a male cat was in the same area on almost the identical home range though his tracks were rarely in an area when fresh tracks of the family were to be found.

Dense bush? Oh yes. The lynx avoids any open plots if possible. They prefer tangled bush and thickets. In this labyrinth, they require more agility than speed, and their body size and shape is certainly suited to it. Moving through this bush, lynx amble along at a slow walk, nosing here and there, resting frequently in a hunting bed. In this way, a cat covers about two to three miles a night. Tracks have shown that they take the odd jump – and they can clear 12 to 15 feet from a standing start – for no apparent reason. They are good climbers, too.

But out in the open, such as a plain or field, they seem to tire quickly, and do not run very fast.

Well, lynx, preferring this dense forest, have been pushed back by civilization and intensive land clearing. They once ranged well down into the United States and, of course, the southern ends of our provinces. Things have changed. They still range from Newfoundland to British Columbia and Alaska, but they are rare in southern Quebec, Ontario, the Prairies and B.C. And they naturally stay away from the tundra – it's too open. There are still some lynx in northern New England and a very few in northern Michigan.

The fact that the present range of the lynx is in the north, where the winters are longer and colder, results in a better pelt on the average. Here in Ontario, good, well handled pelts have ranged between $10.00 to $20.00, each, for the past few years. In its winter prime, the fur is very dense and lustrous and quite soft and silky. Also, if it is pro-

perly handled, it's not greasy.

Lynx is used mainly in jackets and trim. In contrast to many pelts, the white belly fur is the important part when used as trim. You see, the pelt is split down the centre of the back, and each half is folded lengthwise along the centre of the side. In other furs, the centre back is the important area.

Big game? Not too much. You understand, that weighing between 15 and 25 pounds (though the odd specimen has been reported at 40 pounds), the lynx is restricted to smaller animals and birds. There are accounts, of course, of lynx attacking and even killing a few deer and caribou. If the flesh of these animals is found in lynx stomachs, it is in the fall during hunting season. These would be mainly hunter kills.

One paper concerning Newfoundland lynx shows that the main item on the menu is snowshoe hare. In the spring and summer, small birds show up as a food item but disappear after fall migration.

In a year of good mouse populations, these, too, are important, but fade out in the winter when the snow becomes deep.

All sorts of small mammals and birds fill the bill, including grouse. They seem to avoid fish or skunks. Porcupine is passed by, except as a last resort.

This business of depending mainly on the snowshoe hare for food is even more evident when checking back over fur returns. A cycle of about 10 years carries off the snowshoe in great numbers, and the lynx population crashes to a low level.

Fur returns for lynx show such a decrease, once in every 10 years, close behind the snowshoe cycle. The lynx probably starve. Why the snowshoe should die off so rapidly is still a question to be fully answered. Nature has her ways of giving – and also of taking away, if she begins to appear too generous.

Well, I'll tell you what, my son – you pour another cup of coffee while I put another log in the fireplace, and then we'll talk about red fox.

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Adjusting a lynx live trap. Back Cover: Releasing lynx after it has been tagged. Photos by T.J. Carmichael.